

KURODA

Application No. 10/822,147

Response to Office Action dated December 13, 2006

AMENDMENT TO THE TITLE:

Please replace the title of the application with the following title:

INFORMATION RECORDING/REPRODUCING APPARATUS AND METHOD FOR
RECORDING INFORMATION ON A RECORDING MEDIUM

Remarks

Reconsideration and allowance of the subject patent application are respectfully requested.

As requested, the title of the application has been changed.

Claims 10 and 16 have been amended to address the issues raised in the office action and withdrawal of the rejection of these claims is respectfully requested.

Claims 1, 2, 4 and 6-16 were rejected under 35 U.S.C. Section 102(b) as allegedly being "anticipated" by Ishii et al. (U.S. Patent No 4,012,108). Claims 1-16 were rejected under 35 U.S.C. Section 102(b) as allegedly being "anticipated" by Satoh et al. '489 (U.S. Patent No. 4,104,489) or Satoh et al. '480 (U.S. Patent No. 4,224,480). Claims 3 and 5 were rejected under 35 U.S.C. Section 103(a) as allegedly being "obvious" over Ishii et al. in view of Satoh et al. '489.

While not acquiescing in these rejections or in the characterizations of the applied references in the office action, claims 1, 3, 4, 8, 10, 11, 13, 15 and 16 have been amended and claims 2, 7, 9 and 12 have been canceled without prejudice or disclaimer. The discussion below makes reference to the amended claims.

Independent claim 1 has been amended to recite that "*the one-dimensional spatial modulating unit comprises a grating configuration including a plurality of gratings*" and that "*the one-dimensional spatial modulating unit is positioned such that an alignment direction of irradiation images produced by the plurality of gratings is oblique with respect to a direction perpendicular to a moving direction of the recording medium by the moving unit.*" Amendments along these lines have been made to the other independent claims. By way of example without limitation, these features find support in the subject application at page 14, line 19 to page 15, line 18 and Figure 5B. As described in this referenced portion of the subject application, damage to a disc (such as scratching) frequently occurs in the radial direction of the disc and such a scratch may make recorded information such as a hologram unreadable. Irradiation images provided in an oblique manner as described in the above-italicized portions of the independent claims can reduce the possibility that scratching will render the recorded information unreadable.

None of the cited references, taken either alone or in combination, disclose or suggest the

apparatuses or methods set forth in independent claims 1, 8, 11 and 15 and those claims that depend therefrom.

In Ishii et al., the light switch array 27 allegedly corresponding to the claimed one-dimensional modulating unit is positioned such that the alignment direction of the images, i.e., the alignment direction of the light switches 28, is perpendicular to the moving direction of the recording medium 40, as shown in Figures 1 and 4.

Similarly, in the Satoh et al. references, the light modulator 32 is positioned such that the alignment direction of the diffraction pattern is perpendicular to the moving direction, i.e., the tangential direction of the disc 20 as shown in Figure 1B.

In short, none of the applied references teaches or suggests producing irradiation images as claimed such that the alignment direction of these images is oblique with respect to a direction perpendicular to the moving direction of the recording medium. Consequently, claims 1-16 are believed to be allowable over the applied references.

New claims 17-20 have been added. The subject matter of these new claims is fully supported by the original disclosure and no new matter is added.

New claim 17 depends from claim 8 and is believed to be allowable at least because of this dependency.

New independent claim 18 is for an information recording apparatus which includes a one-dimensional spatial modulating unit that comprises a grating configuration including a plurality of gratings, wherein the one-dimensional spatial modulating unit is positioned such that axial directions of the recorded hologram marks are offset with respect to a radial direction of a recording disc. No such apparatus is disclosed or suggested by the applied references.

New independent claim 19 is for a holographic disc encoded with hologram marks whose axial directions are offset relative to a radial direction of the holographic disc. No such disc is shown or disclosed in the applied references.

New independent claim 20 is for a reproducing apparatus configured to reproduce information from the holographic disc encoded hologram marks whose axial directions are offset relative to a radial direction of the holographic disc. No such apparatus is shown or suggested in the applied references.

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The pending claims are believed to be allowable and favorable office action is respectfully requested.

Respectfully submitted,

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